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STEM RUST AND BARBERRY NEWS

Issued by

Office of Barberry Eradication

Volume I

Number 2

May 25, 1930

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Bureau of Plant Industry
U. S. Department of Agriculture

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PUBLICATION NOTICE

This is the second issue of Stem Rust and Barberry News, the first issue having appeared on May 15. In the future it is planned to issue the News on the 10th and 25th of each month during the summer season.

Let us know what you think of the News and send us your suggestions for making it more interesting and valuable to the field offices and co-operators.

In a memorandum dated April 9, it was requested that semi-monthly reports be prepared and mailed so as to reach this office on the 10th and 25th of each month. Arrangements have been made for future issues of the News to be ready for distribution on the 10th and 25th of each month, as stated above, therefore it is requested that the semi-monthly reports reach this office not later than the 5th and 20th of each month.

THE OFFICE OF BARBERRY ERADICATION

Dr. E. C. Stakman spent May 25 in Washington discussing survey and epidemiology plans for the summer with Mr. Meier and Mr. Fletcher. Doctor Stakman has taken leave from the Department for a year and will spend a part of this time abroad. Arrangements have been made to conduct the epidemiology work along much the same lines as a year ago with Miss Hamilton, secretary to Doctor Stakman, continuing to receive and assemble rust information supplied by the Barberry Leaders and their assistants. Doctor Stakman will return to St. Paul in August.

Mr. F. C. Meier, Chief of the Office of Barberry Eradication and Mr. Charles O. Violet, Agent, left May 22 for a visit to the Arnold Arboretum at Harvard University. Mr. Meier and Mr. Violet will discuss identifications of species of Berberis with nurserymen and others interested in the propagation and distribution of species, varieties, and hybrids of rust susceptible barberry bushes. Mr. Violet is conducting extension work with nurserymen in Ohio in connection with the barberry eradication campaign.

According to Doctor Stakman and Dr. Cotter there are now 120 different species, varieties, and hybrids of Berberis and Mahonia susceptible to black stem rust. The problem of assembling available information pertaining to this subject and placing it in the hands of nurserymen in the barberry eradication area interested in the propagation of decorative shrubs is now receiving attention.

A cooperative arrangement with the Office of Blister Rust Control to conduct field investigations in chemical eradication on barberry bushes has been completed. Mr. H. R. Offord will have direct supervision of this work and during the month of June will visit the States of Wisconsin, Ohio, Michigan, Indiana, and Illinois, to locate field plots and outline a plan of procedure for the future.

In order to overcome many of the difficulties encountered by leaders in the issuing of bids for the purchase of automobiles in the field, the Washington Office is taking steps to handle such purchases through bids obtained directly from factory representatives. The cars will be delivered by a local dealer in your territory much the same as in the past.

W. L. Popham

Current G. A. O. Decisions

The following give in substance recent rulings of the General Accounting Office. If a more elaborate discussion of these points is desired, you should refer to complete copies of these recently sent you.

(A-30415)

9 Comp. Gen. 381

TRAVELING EXPENSES, DIVISION OF - GASOLINE AND OIL

An employee of the Government, while traveling in an automobile on official business, accompanied by other employees not in a duty status may be reimbursed only his pro rata share of the cost of gasoline and oil consumed.

(A-30577)

9 Comp. Gen. 378

CONTRACTS - ADDITIONAL PAYMENTS

The act of April 10, 1928, 45 Stat. 413, does not authorize or justify any report or recommendation that a contractor be paid any sum in excess of the contract price for the performance of Government work simply because by the performance of the contract entered into after competition, the contractor incurred a loss rather than a profit.

(A-30795)

9 Comp. Gen. 412

PRINTING AND BINDING - FILLERS FOR RING BINDERS

Fillers for ring binders, consisting of ruled and punched sheets without other printing, which are not listed as paper available from the Government Printing Office but are carried in stock by dealers for sale to the public generally and require no printing operation after receipt of requisition, may be procured by contract from the lowest bidder, they not coming within the purview of the acts of June 28, 1902, 32 Stat. 481, March 1, 1919, 40 Stat. 1270, or the act of June 7, 1924, 43 Stat. 592.

(A-30971)

9 Comp. Gen. 415

PUBLIC PROPERTY - LOAN OF - DEPRECIATION

Where equipment of one governmental agency is borrowed and used by another governmental agency there is no authority of law to demand a return or compensation based upon the use alone, hence reimbursement for use and depreciation of such property is not authorized. 3 Comp. Gen. 74 distinguished.

(A-31080)

9 Comp. Gen. 421

PURCHASE OF LAND BY THE GOVERNMENT - RENT - INTEREST

Where a delay occurs in the consummation of an executory contract for the purchase of land by the Government, caused by failure of the vendor in the first instance to furnish a satisfactory title, there is no authority, under the appropriation act providing only for the purchase of land, for the payment of rent or interest from the date informally set by the parties to the agreement as a reasonable time in which to consummate the terms of the contract, to the date the deed was actually approved by the Attorney General, as provided by section 355 of the Revised Statutes.

EPIDEMIOLOGY

(Reported by Miss Laura Hamilton)

Plans are being made for ecological studies on the barberry. It is hoped to have field observations made in several States, representative of the several areas comprising the eradication territory, and to carry on controlled experiments in South Dakota and Minnesota where excellent equipment is available.

Cooperative arrangements have been completed between the Department of Agriculture and the Department of War for slide exposures to be made from airplanes at the following flying fields: Kelly Field, Texas; Ft. Sill, Okla.; Ft. Riley, Kans.; Chanute Field, Ill.; and Wright Field, Ohio. Slides were exposed by Mr. Ukkelberg at Kelly Field about the middle of April and upon his return from Mexico he will make additional exposures. All of the slides exposed in April have not been examined but so far only three stem rust spores have been found. There were some leaf rust spores, and smut spores were present in abundance.

Lee Hines was transferred to the full time basis on May 1 and will examine slides exposed in the various States, in addition to his greenhouse work in the physiologic form survey.

Mr. Ukkelberg expects to leave Mexico about May 10 with several dozen samples of stem rust. There was very little rust in the fields he examined near Monterrey and Saltillo, although leaf rusts of wheat and oats were prevalent. Stem rust was rather scarce until he reached the grain growing districts around Puebla and Atlixco. Near Puebla the infection was not severe but southwest of there some fields were heavily infected.

Mr. Butler made observations on April 25-27 in central Texas, between San Antonio and Fort Worth, and was able to find a trace of stem rust in susceptible varieties of wheat as far north as Comanche and Clifton. In most cases from 20 to 40 minutes were required to find a pustule. No stem rust was found on oats or barley.

An up-to-date list of susceptible and resistant barberries has been prepared by Doctor Levine and Doctor Cotter and copies sent to Agents in Charge of Barberry Eradication Offices. The circular entitled "Cardinal Facts Regarding Stem Rust" also has been revised and copies will be ready for distribution very soon.

Rust Notes from Barberry Leaders

Illinois - Week ending May 10.

Territory covered - central and southern Illinois. Dry hot weather with strong south winds. Few local showers. State in need of rain. Winter wheat in joint stage. Oats in seedling stage.

An escaped bush in Pike County was heavily rusted; 30 bushes in LaSalle County lightly rusted (pycnia stage). No spread to grain. Leaf rust was general in southern Illinois.

Indiana - Week ending May 10

Territory covered - Southern Indiana. Twelve escaped bushes in Owen County were moderately infected with stem rust; 30 bushes in Monroe County were moderately infected. The cluster cups were open in a few cases. Wheat in southern Indiana is in the boot, being about two weeks ahead of the average season.

Leaf rust was quite prevalent but only a few pustules found on each plant.

Ohio - Week ending May 17

Territory covered - Montgomery and Hamilton Counties. Rust survey also made in northeastern part of State. Weather conditions were cool with light showers. Wheat starting to head, other grains about 5 inches high. Infection found in Hamilton, Montgomery, Geauga, Trumbull, Ashtabula, Erie, and Seneca Counties. Cluster cups were open. No stem rust spread from barberry bushes was found. A trace of leaf rust was observed on wheat in Hamilton County, May 13.

Illinois - Week ending May 17.

Observations confined to Franklin, Saline, Galatin, White, Edwards, and Wabash Counties. Weather - few light rains followed by cool weather. General rain badly needed. Winter wheat in the flower stage. Oats poor, some fields heading at a height of twelve inches. Barberry bushes in Franklin County showed no infection.

Leaf rust of wheat general in southern counties. Little likelihood of stem rust damage in the winter wheat crop.

Colorado - Week ending May 17.

Territory covered - Laramie County. Weather - general rain followed by cool weather. Winter wheat stooling, spring grain in seedling stage. No rusted barberry bushes found. No stem or leaf rust found.

EASTERN REGIONOhio - 8 East Broad Street, Columbus - Harry Atwood

Rust infection on common barberries was found in Ohio for the first time this spring on April 24. At the time this infection was observed only pycnia could be found. The first find of rust on barberries this year was 17 days later than the date of the first rust observed on barberries in Ohio in 1929.

To date three additional infections have been observed on barberries in Montgomery, Henry, and Lucas Counties. These were aecial infections.

One township has been covered by intensive survey since April 25. Four men have been conducting survey activities near Dayton, Montgomery County. They have found a number of locations where bushes have been planted and several areas of escaped bushes. The escaped bushes found are well distributed over the township.

During the visit of Mr. Meier he helped with actual/operations near Dayton. He was taken on a rust inspection trip into the northwestern part of the State. While riding along the road near Maumee he spotted a medium sized barberry bush about 300 feet from the road in a pasture wood-lot. Upon closer examination it was discovered that many more bushes of various sizes were growing in this area.

Indiana - Agricultural Experiment Station, La Fayette - Wayne E. Leer

Plans for the Indiana State Fair barberry demonstration have been approved by the Division of Exhibits and Director Skinner. Construction work on the demonstration will begin at once. It is hoped to have everything ready early in July.

On May 1, Messrs. McCoy, Castell, Paddock, Wright, and Galloway began work on an area of escaped bushes in Owen County. This area was originally discovered by a 12 year old school girl at Freedom, who later received a medal from the Conference for the Prevention of Grain Rust.

An area of escaped bushes was found by a school boy at Crandall in Harrison County late in April. Mr. McCoy spent a day scouting with some school children, and about 30 escaped bushes were found. It is planned to do more work in this area before July 1.

Survey plans for 1930 were discussed with Mr. Popham April 21 and 22. Tentative plans call for survey in areas of escaped bushes until July 1, then intensive survey in Bartholomew and Decatur Counties and parts of Jackson, Jennings, Ripley, and Franklin Counties. In this particular section of the State, stem rust has been a serious problem for the past several years.

On April 24 and 25 a trip was made to an area of escaped bushes in Fountain County and one in Owen County to look for infection. Pycnia were found in both areas. The seedlings which were mulched with telial material at Indiana University April 10 showed pycnia on April 25.

A barberry demonstration was prepared and set up at Purdue during the annual Egg Show and 4-H Boys and Girls Club Round-Up May 5 to 10.

Illinois - Box 72, Post Office Building, Urbana - R. W. Bills

The first squad of barberry field agents is completing the survey of Franklin County this week. Four locations of barberry bushes have been found, two city properties and two rural properties. No rust infection was found on these bushes and no escaped bushes have been discovered.

Mr. L. R. Davis, who is doing publicity work in Illinois, has given illustrated lectures at Sesser High School, southern Illinois Teachers' University, and unit meetings of the Farm Bureau held at Johnson City and Thompsonville. Other meetings are scheduled for the near future.

Two heavily rusted barberry bushes were found in Pike County on May 6 by the Agent in Charge. The infection was still in the immature aecial stage. On May 10 about 30 small bushes were found in a wild area near LaSalle. Only a light pycnia infection was found on them. Inspections have not been made in extreme northern Illinois for 3 weeks but a trip will be made there about May 21.

Leaf rust has been found in light amounts but rather generally in southern Illinois and in the winter wheat belt southeast of St. Louis.

One pustule of wheat rust was found in LaSalle County on May 10. No stem rust on grains or grasses has been found thus far this year.

Crown rust infection on buckthorn was found in LaSalle County on May 10. The cedar trees of southern Illinois show a general infection of apple rust this spring.

Michigan - Agricultural College, East Lansing, Francis B. Powers

The first aecial infection was found in Michigan May 3. Heavy warm rains followed by hot weather on the first and second of May made a very favorable condition for the rust. Barberry leaves soon showed small rust spots. The first infections were reported in Sanilac County by men working in that vicinity.

A squad of five men, Squad Leader H. T. Hunter and Messrs. Salisbury, Normington, Van Dam and Hunter began field work May 1. Their first work was performed in Sanilac County where they cleaned up an area which was reported last winter. The squad is now working near Saugatuck.

Several years ago the largest hedge ever found in Michigan was destroyed at Saugatuck. There is a large number of escaped bushes in that vicinity being destroyed by the agents. The number of bushes destroyed to May 15 totaled 5,288 and seedlings 3,225. Most of these bushes were

dug as they were located valuable vegetation. Bushes are still being destroyed in this area but indications show a decrease in numbers as distance from the hedge increases. The barberry bushes are located along the shore of Lake Michigan for a great distance but seem not to be farther inland from the lake shore than a mile.

The weather during this period has been very warm and for a greater share of the time, fairly dry. Most of the month has been favorable for rust spread although no infection has yet been reported on grains.

Wisconsin - State Capitol Annex, Madison - Ralph M. Caldwell

Barberry bushes have now been found infected with stem rust in 3 counties in southern Wisconsin. The first infection was discovered on May 3 in Sauk County and was still in the early pycnial stage. The last infection found in Green County near the southern State boundary was still in the pycnial stage on May 11. Infection thus far is very light.

A semi-competitive examination was given to a group of applicants for barberry eradication work on May 14. Selections for the field force will be made soon after this date. Mr. Arnold Ullstrup, a squad leader in barberry eradication last year, will be the assistant leader. He will give the major portion of his attention to the supervision of survey, working with the field men.

A trip was made recently into Cadiz township of Green County where a small area of escaped bushes was found in 1928. Some salting was done here by one man in that year although a careful survey has not yet been made. Bushes have been growing in this region for possibly 75 years. This is a very fertile grain-producing section and it seems advisable to place a squad there this season to cover the area to a safe distance beyond points at which bushes can be found. A number of large fruiting bushes were observed on this trip.

WESTERN REGION

Minnesota - University Farm, St. Paul - Leonard W. Melander

On May 1 five field men reported for duty. They proceeded immediately to Austin to start a resurvey of Mower County. This county has never been thoroughly resurveyed. However wood inspectors have looked after some of the locations. There were quite a large number of old fruiting bushes found on the first survey. In view of this fact, the resurvey should produce numerous escaped bushes and seedlings. On the other hand there is

practically no native timber in the county. Most of the woodlots are planted groves. The county agent promised to cooperate with us.

Three of these field men will attend the weed tours from May 15 to July 1. They will explain the relation of common barberry to black stem rust to township chairman and other interested farmers and to municipal and county officials. In addition, these field men will confer with school officials, county agents, and other people interested in the barberry eradication campaign.

A conference was held with the county agent and the 4-H club leader of Dakota County on May 1. A talk was given this same morning to pupils in the rural school that Ernest Schmidhuber attends, the boy who wrote up the constitution for the Rosemount Chapter of the National Rust Busters' Club. The pupils seemed interested in the Rust Busters' Club. The 4-H Club Leader and the county agent gave assurance that they would encourage the boys and girls of Dakota County to hunt for common barberry. They mentioned one or two barberry hunting hikes made by school children of Dakota County. This perhaps was stimulated by the school campaign last fall. Several plantings have been found by Dakota County school children and teachers.

On May 1 stem rust in the pycnial stage was found in Faribault, Rice County. The infection was very light. On the next day rusted barberry bushes were found near Rochester, Olmsted County. Here the pycnia were exuding nectar. About 30 per cent of the leaves were infected. With the warm, moist weather of the past week, aecia should be forming rapidly. This will mean early dissemination of aeciospores.

District No. 1 - State College Station, Fargo, N. Dak. - G. C. Mayoue

Montana - Applicants for positions on the field force are now preparing for an examination to be given when the Barberry Leader goes to Montana about June 1. These men have been given Federal and State bulletins, circulars, reports, and Doctor Stakman's Cardinal Facts, as well as a set of questions prepared as a guide.

North Dakota - With the exception of 3 schools that can not be reached because of wet roads, the organization of Rust Buster Clubs in Barnes County has been completed. While an accurate and detailed report must necessarily await the completion of the organization in these schools, preliminary data, which is felt to be quite accurate, indicates that in 16 actual man days 3,350 students in 99 schools have been reached.

Following an interview with Doctor Allen, President of the Valley City State Teachers College, Barnes County, the educational assistant spoke to some 700 students and faculty members at the regular chapel

period of the college. The purpose was to follow up the local publicity which has been received and explain to these future teachers the barberry campaign's educational program and its latest activity, the Rust Busters Club.

Two field agents, employed with State funds, began regular field survey May 5 in McLean County.

The average date for the beginning of spring wheat seeding was April 6 compared with the average date of April 12 for last year. According to reports the wheat acreage has been reduced approximately 15 per cent, which has been or will be diverted to flax and forage crops. There appears to be a slight increase in the acreage of hard spring wheat over durums. The soil throughout the State was in excellent condition for working up well. Approximately all the seeding of wheat, oats, and barley was completed by the first of May. Considerable flax has already been seeded. Ideal weather for seeding, followed with plenty of precipitation and sufficient warmth for these crops, except flax, places them in a first-class condition. Winter rye is below the average condition of last year. This estimate is based on the probable effects of winter and early spring temperatures. The alternate freezing and thawing this spring is likely to cause some damage.

Wyoming - Dr. W. G. Solheim, Department of Botany has kindly offered his cooperation and assistance in the work which will be carried on in this State. Dr. Solheim is a former barberry agent from Illinois. In response to a request, he has already furnished the names of 3 men, students at the University of Wyoming, whom he feels would qualify very well for this kind of work.

District No. 2 - Box 66, State College Station, Brookings, S. Dak.-
Raymond O. Bulger

Field work in barberry eradication started in earnest in District No. 2 when a squad of four men began work in Charles Mix County, South Dakota on May 1. About 3 per cent of this county remains to be covered by intensive survey and consists of rough hilly territory with a lot of trees and underbrush on it. The remainder of the county was surveyed last season.

Field work in Nebraska will start on June 9 after 18 men and an assistant leader have attended a 2-day conference and school at Lincoln. College and State officials have promised help in making this conference and school a success.

During the later part of April Mr. Charles E. Davies, assistant, covered all of the rural schools in Davison County on educational work. This is one of the counties to receive an intensive survey this year.

Mr. Davies gave a short talk at each school in which he emphasized the fact that a medal is given to every boy or girl who finds and reports barberries. He also left bulletins, posters, a literature file, and other educational material with the teacher. Excellent cooperation was secured from the teachers and county superintendent.

The barberry leader was invited to attend and give a talk before the Annual Conference of Extension Specialists held at Brookings, May 5 and 6. Valuable information was received relative to extension methods which may be applicable to barberry work. On May 27 and 28 the barberry leader will attend the State convention of the Young Citizens League at Pierre, S. Dak. He is scheduled to talk before the group on the afternoon of the second day.

District No. 3 - Agricultural College, Ft. Collins, Colo. - E. A. Lungren

During the month of April second survey was started in Douglas County following the check up on barberry leads. On the original survey no bushes were found in this county. On second survey last month two properties were found; one planted and one escaped. The escaped bush was in Marcy Gulch and evidently came from seeding barberries in Arapahoe County. On our check up work 7 sprouting bushes were found, 3 planted bushes and 3 escaped bushes.

The barberries are in full leaf but no infection has been found to date.

On May 2, we felt much elated over the fact of getting out a bush which had long been in darkness. This was on a property in Larimer County. The owner had always opposed barberry eradication and insisted on keeping the bush. Many promises had been made but the bush never came out. On May 2 the owner finally came over and helped us get the bush out. We were very cautious to take it far away and burn it.

Personnel Items

Mr. Donald G. Fletcher, Supervisor of the Western Region, left Washington May 20. Mr. Fletcher came to Washington for conference with Mr. Meier.

Dean H. L. Bolley, who will leave for South America on June 17 on a year's leave of absence from the North Dakota Agricultural College, will study varieties and diseases of Plants. He is taking with him good slides showing the common barberry and black stem rust for use in illustrated lectures on the subject. Dean Bolley will make studies of common barberry and black stem rust while on his trip through South America.

